mode of production of these two classes of mineral formations. We have all the evidence that can reasonably be desired of the previous condition of those underlying rocks, their ancient, and at a depth not great their present, liquidity by heat, their boiling up, their extrusion both in the melted state and in different degrees of advancement towards being cooled and hardened, their being driven upwards through the overlying formations of deposited layers, their sometimes insinuating themselves between the previously contiguous surfaces of those deposits, their filling long furrows of outburst, and their being laid bare in many cases to open day-light. It is therefore no presumption to affirm that we do know, with the clearness of sensible evidence, the constituent formations of the crust of the earth, their modes of production, their relations to each other, and the fact of their enveloping a mass of materials, similar in composition to the lowest rocks, and which we have much reason to think are, at certain depths, still in a state of constant fusion.

Those who bring forward this objection are, perhaps, not aware of its bearing. Were it well founded, its effects would be to augment, by immeasurable degrees, the antiquity which must be attributed to the earth.

In replying to this objection, which is brought up at the very threshold of geological inquiry, I have been led into an anticipation of several positions, which must be stated more in regular detail.

II. There are good grounds for supposing that, beyond a certain thickness for the solid crust of the earth, which can hardly be estimated at so much as thirty miles, the next contiguous matter is in a state of fusion, at a temperature probably higher than any that man can produce by artificial means; or any natural heat that can exist on the surface. Whether, in like manner, the whole interior of our planet be composed of melted matter; or whether